|  |  |  |  |
| --- | --- | --- | --- |
| Indicator | Color 1 (pH range) | Color 2 (pH range) | Color 3 (pH range) |
| Phenolphthalein | Colorless (below 8) | Pink (above 8) | None |
| Methyl orange | Orange (below 3) | Yellow (above 3) | None |
| Bromthymol blue | Yellow (below 6) | Green (between 6 and 7.5) | Blue (above 7.5) |
| Blue litmus paper | Pink (below 7) | Blue (above 7) | None |
| Pink litmus paper | Pink (below 7) | Blue (above 7) | None |
| Thymol blue | Red (below 1.5) | Yellow (above 1.5) | None |
| Congo red | Blue (below 3) | Red (above 3) | None |
| Alizarin yellow | Colorless (below 10) | Yellow (above 10) | None |
| Bromcresol purple | Yellow (below 5.5) | Purple (above 5.5) | None |
| Bromphenol blue | Yellow (below 3) | Green (between 3.1 and 4.4) | Blue above 4.5 |

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What is an indicator?

Determine what color each of the following would turn in the following pH’s and determine if the solution is acidic, basic, or neutral by circling an A, B, or N in the pH box.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| pH | Phenolphthalein | Bromphenol blue | Bromcresol purple | Alizarin yellow | Methyl orange | Bromthymol blue | Blue litmus | Thymol blue | Congo red |
| 6  A B N |  |  |  |  |  |  |  |  |  |
| 1  A B N |  |  |  |  |  |  |  |  |  |
| 12.6  A B N |  |  |  |  |  |  |  |  |  |
| 9.4  A B N |  |  |  |  |  |  |  |  |  |
| 3.5  A B N |  |  |  |  |  |  |  |  |  |
| 14  A B N |  |  |  |  |  |  |  |  |  |
| 11.4  A B N |  |  |  |  |  |  |  |  |  |
| 7  A B N |  |  |  |  |  |  |  |  |  |
| pH | Phenolphthalein | Bromophenol blue | Bromcresol purple | Alizarin yellow | Methyl orange | Bromthymol blue | Blue litmus | Thymol blue | Congo Red |
| 7.2  A B N |  |  |  |  |  |  |  |  |  |
| 6.8  A B N |  |  |  |  |  |  |  |  |  |
| 8.4  A B N |  |  |  |  |  |  |  |  |  |
| 2.8  A B N |  |  |  |  |  |  |  |  |  |
| 4  A B N |  |  |  |  |  |  |  |  |  |
| 10.9  A B N |  |  |  |  |  |  |  |  |  |
| 5.5  A B N |  |  |  |  |  |  |  |  |  |
| 13.4  A B N |  |  |  |  |  |  |  |  |  |